

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

In re Patent Application of

KUMAR

Serial No. 09/831,555

Filed: August 14, 2001

Title: SCANNING OF ELECTROMAGNETIC BEAMS



Atty Dkt. SCS-540-311

C# M#

TC/A.U.: 2821

Examiner: M. Wimer

Date: August 15, 2007

ZTW
AF

Mail Stop Appeal Brief - Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

☐ **Correspondence Address Indication Form Attached.**

☐ **NOTICE OF APPEAL**

Applicant hereby **appeals** to the Board of Patent Appeals and Interferences
from the last decision of the Examiner twice/finally rejecting \$500.00 (1401)/\$250.00 (2401) \$
applicant's claim(s).

☐ An appeal **BRIEF** is attached in the pending appeal of the
above-identified application \$500.00 (1402)/\$250.00 (2402) \$

☐ Credit for fees paid in prior appeal without decision on merits -\$ ()

☒ A reply brief is attached. (no fee)

☐ Petition is hereby made to extend the current due date so as to cover the filing date of this
paper and attachment(s)
One Month Extension \$120.00 (1251)/\$60.00 (2251)
Two Month Extensions \$450.00 (1252)/\$225.00 (2252)
Three Month Extensions \$1020.00 (1253)/\$510.00 (2253)
Four Month Extensions \$1590.00 (1254)/\$795.00 (2254) \$

☐ "Small entity" statement attached.

Less month extension previously paid on -()

TOTAL FEE ENCLOSED \$ 0.00

Any future submission requiring an extension of time is hereby stated to include a petition for such time extension.
The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or
asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this
firm) to our **Account No. 14-1140**. A duplicate copy of this sheet is attached.

901 North Glebe Road, 11th Floor
Arlington, Virginia 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100
SCS:kmm

NIXON & VANDERHYE P.C.
By Atty: Stanley C. Spooner, Reg. No. 27,393

Signature: _____



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REPLY BRIEF

This Reply Brief is responsive to the Supplemental Examiner's Answer mailed June 15, 2007, the date of response to which is August 15, 2007. The "Supplemental Examiner's Answer" (which, in fact, appears to be responsive to the Appeal Brief filed November 12, 2004) sets forth numerous admissions and raises new points of argument which will be addressed in the order that they appear.

In section 11 on page 3 of the Examiner's Answer, the Examiner admits "it is recognized what the Briggenshaw reference does **not show** from the discussion on page 6, first two paragraphs . . ." (emphasis added). Appellant's Appeal Brief on page 6, first paragraph, merely describes what Briggenshaw teaches. However, the second paragraph (beginning with "However") points out what Briggenshaw does not teach, and the

Examiner's admission as to the correctness of Appellant's analysis of the Briggenshaw reference is very much appreciated. As such, the Examiner admits that in Briggenshaw "not only is the beam somewhat offset from the central axis, it is also non-parallel to the central axis when it leaves, having been 'bent' into direction θ ."

The other statement in the second paragraph on page 6 of the Appeal Brief is similarly admitted to, i.e., "the Examiner does not point out any indication that Briggenshaw teaches the transmission of a beam in a direction parallel to and spatially offset from the central axis." (Emphasis in the original). The admission that this analysis of the Briggenshaw reference is correct is very much appreciated.

In the second paragraph under section 11 "Response to Argument" of the Examiner's Answer, the Examiner also states that "it is recognized what the Briggenshaw reference does not show from . . . the paragraph bridging pages 9 and 10 [there is no reference to the Briggenshaw reference in the paragraph bridging pages 9 and 10] and on page 10 of the Brief."

The Briggenshaw reference is discussed in the first full paragraph on page 10 and the confirmation as to the correctness of Appellant's statement "there is no such structure disclosed in Briggenshaw, i.e., a structure which has any "phase correcting dielectric (or equivalent thereto) which change the direction of the beam to be 'parallel with the central axis' (while remaining 'offset' as recited)." Thus, the Examiner's admission that Briggenshaw does not disclose, teach or suggest a "phase correcting dielectric" or any other structure which changes the direction of the beam to be parallel with the central axis while remaining offset as recited in the claims is again very much appreciated.

Appellant believes these admissions clearly establish that neither Briggenshaw nor Darbowitch contain any structure meeting Appellant's claimed "steering means for steering the radiation beam . . . [and causing] the radiation beam to emerge from the transmission means spatially offset relative to the central axis in free space in a known direction" as recited in the claim.

The Examiner, in the last paragraph on page 3 of the Examiner's Answer, suggests that there is a first issue with respect to the Summary of the Invention portion of Appellant's Brief. The Examiner alleges that "the body itself does not cause the 'spatial' displacement alone. It is the phase correcting lens/layer 20, located beyond the exit plane of the body that acts on the beam" and references Appellant's Figure 1.

It is noted that the Examiner's reference to Figure 1 is an illustration that the beam 12 enters the body along the central axis 24, but leaves the body offset from that central axis but in a direction parallel to the central axis.

However, the Examiner appears to be arguing that it is the body 14 as well as the phase correcting dielectric 20 which causes the change or the steering of the radiation beam. Whether it is the phase correcting dielectric only or the phase correcting dielectric in combination with the body 14 is of no consequence. The claim language is legally presumed - by virtue of the use of the word "means" - to be in means-plus-function form and thereby covering the corresponding structure in the specification and equivalents of such structure. Whether the corresponding structure disclosed in the specification is only the "phase correcting dielectric" or is the combination of the phase correcting dielectric and the body 14 does not avoid the logic of the Appeal Brief argument, i.e., that, as the

Examiner appears to admit, neither the primary reference Briggenshaw nor the secondary reference of Darbowitch teach any combination of structures which cause the radiation beam “to emerge from the transmission means spatially offset relative to the central axis in free space in a known direction” and parallel to the central axis. Either, the Examiner attempts to raise an issue which does not bear on the claim construction argument or he admits that the Briggenshaw reference fails to disclose structure which is positively recited in independent claim 1.

In the first paragraph on page 4 of the Examiner’s Answer, the Examiner also suggests that there is a second issue regarding interpretation of claim 1. The Examiner does not appear to admit that in order to properly construe a means-plus-function claim under 35 USC §112 (paragraph 6) the Examiner does not have to construe the claim to cover the corresponding structure disclosed in the specification (and equivalents thereto). Instead, the Examiner avoids the statutory requirement of §112 (6th paragraph) and suggests that “this matter is an issue of breadth of the claim language” apparently not appreciating that, as the Federal Circuit has consistently held, in *In re Donaldson* and its progeny, that means-plus-function claims are relatively narrowly construed in accordance with §112 (6th paragraph).

The Examiner alleges that “there is no need to import definitions from the specification.” The Examiner is simply incorrect because there is no doubt that the “steering means” recitation in Appellant’s independent claim 1 does not recite any structure for accomplishing the “steering” of the radiation beam or the causing of the “radiation beam to emerge from the transmission means spatially offset relative to the

central axis in free space in a known direction” which are the two functions specified in the claim.

Because the word “means” is used and because there is no structure recited in the claim which will accomplish the recited functions, the Examiner is bound by statute to properly construe the claim so as to cover the corresponding structure disclosed in the specification and equivalents thereof. Here, it is clear that the Examiner has misunderstood and/or misconstrued the statutory requirement that he properly construe the claims in accordance with § 112 (6th paragraph).

As noted in Appellant’s Brief, there is nothing in either Briggenshaw or Darbowitch which discloses the structural equivalent of the steering means “corresponding structure” disclosed in Appellant’s specification.

In the third full paragraph on page 4 of the Examiner’s Answer, the Examiner again admits that the description of the Briggenshaw reference, as set forth in the first paragraph on page 6 of the Appeal Brief, is correct. This paragraph confirms that the Briggenshaw teaching is to utilize a block of ferromagnetic material “across which a magnetic field gradient is applied.” A review of the Briggenshaw reference will confirm that the magnetic field gradient is established by the electromagnetic coils only with “the angle being adjusted by the location and strength of electromagnetic fields in the block.” Thus, the Examiner is admitting that the Briggenshaw reference teaches steering by only the ferromagnetic block and the magnetic field gradient applied to the block without any Phase correcting dielectric as in the present specification.

Even more importantly, the Examiner is admitting that in Briggenshaw “an input beam can be steered so as to exit the block at an angle to the input axis” thereby admitting Appellant’s previous contention that the output of the Briggenshaw block is not only offset from the input axis, but it is also at “an angle to the input axis.” The admission, on page 4, 3rd full paragraph, that Appellant’s assessment of the Briggenshaw reference is factually correct is very much appreciated.

In the paragraph bridging pages 4 and 5 of the Examiner’s Answer, the Examiner argues that Appellant’s argument that the Briggenshaw reference provides a beam that is ‘non-parallel to the central axis when it leaves’ but that, in the Examiner’s view, such a characterization “meets the recitation in claim 1 because nowhere does the language therein state that the beam must be parallel to the axis.” Again, although this is noted in Appellant’s Brief, in the first full paragraph on page 9, the Examiner is ignoring the language of claim 1.

Claim 1, in means-plus-function format (this format was admitted to exist by the Examiner) claims a “steering means.” That steering means accomplishes the function of “steering the radiation beam” and the claim further specifies that this steering is accomplished in a particular fashion, i.e., steering which “causes the radiation beam to emerge from the transmission means spatially offset relative to the central axis in free space in a known direction.” The corresponding structure disclosed in Appellant’s specification is not merely the body of magnetic material through which the beam passes, but, as noted by the Examiner, includes the “phase correcting dielectric 20.” There is no disclosure of any “phase correcting dielectric 20” in the Briggenshaw or Darbowitch

references. Therefore, neither Briggenshaw nor Darbowitch can teach the “corresponding structure” of the “means” claim.

Moreover, as discussed in Appellant’s specification, an inherent characteristic of the combination of the magnetic material and the phase correcting dielectric 20 (i.e., the “corresponding” structure disclosed in Appellant’s specification) is to provide, as clearly shown in Figure 1, an output beam 12 which is offset from the central axis 24 of the input beam 12 and remains parallel thereto. Accordingly, not only does Appellant’s independent claim 1 require a steering means having the structure disclosed in Appellant’s specification (i.e., at least including the “phase correcting dielectric 20” as admitted by the Examiner), but also the combination of structural elements which has the inherent feature of the output beam being parallel to and offset from the axis of the input beam.

In view of the above, the Briggenshaw and Darbowitch references fail to teach the combination of elements disclosed in Appellant’s specification which are combined to perform in the manner discussed, i.e., spatially offset and parallel to the central axis and the input direction.

The Examiner attempts to support his argument by saying that the claim does not include the word “parallel” and Appellant agrees that this is not specifically recited in the claim. However, what is specifically recited in the claim is the “corresponding” structures in Appellant’s specification which accomplishes the function of the “steering means.” The function provided by this combination of elements, as shown in Figure 1, is to inherently create both an offset and parallel beam. Thus, the Examiner again is being

tripped up by his failure to properly construe the “steering means” language of claim 1 in means-plus-function format.

The Examiner’s admission that page 7, second paragraph of Appellant’s Brief, is a “correct characterization of the Darbowitch patent” is very much appreciated. The Examiner follows that admission in the paragraph bridging pages 5 and 6 with a regurgitation of the same argument with respect to Briggenshaw, i.e., that there is no requirement that the claimed “steering means” structure be construed to a corresponding structure which, as disclosed in the specification, spatially offsets the beam which then exits parallel to the central axis of the transmission means.

While the Examiner contends that this is not what is claimed in independent claim 1, a proper claim construction will confirm that not only is one of the “corresponding structures” missing, i.e., there is no disclosure of the “phase correcting dielectric 20” in Darbowitch and there is also no combination of structures disclosed in Darbowitch which provide the function specified in claim 1. The Appellant’s combination of structures inherently provides the “parallel to the central axis” feature as well.

Appellant’s position, of course, is that the “steering means” in proper means-plus-function construction covers the combination of elements set out in the specification and as disclosed in the specification, and one inherent characteristic of the disclosed combination is that the output is spatially offset and parallel to the central axis. If the Examiner properly construes claim 1, he will also, of necessity, come to this same conclusion.

In the paragraphs bridging pages 6-9 in the Supplemental Examiner's Answer, the Examiner merely revisits his same argument in which he fails to follow the dictates of 35 USC §112 (6th paragraph) and instead construes claim 1 in non- means-plus-function format to cover all structures providing any function which is recited in the independent claim 1. Thus, he does not limit claim 1 to the "corresponding structures" set out in the specification, which structures include the "phase correcting dielectric 20" which changes the direction of the beam so as to travel in a direction parallel to the central axis.

The Examiner's attention is directed to Appellant's specification, page 11, the second paragraph, which states "the phase correcting dielectric 20 changes the direction of the beam 12 so that it travels towards the reflector 64 in a direction parallel to the central axis 24." Appellant's specification clearly details the interrelationship between the body and the phase correcting dielectric 20 so that the beam output from the dielectric 20 is "in a direction parallel to the central axis 24."

The Examiner has provided no evidence in any reference tending to dispute this disclosed interrelationship between the elements in Appellant's specification. The Examiner's continual re-argument of the same point which necessarily requires ignorance as to proper means-plus-function claim construction does not advance his position. The points raised in Appellant's Appeal Brief, confirming that the Examiner has misapplied the references, has ignored the fact that Briggenshaw teaches away from the claimed invention and has failed to provide any reason for combining elements from the prior art references, merely confirms the lack of any *prima facie* basis for the rejections.

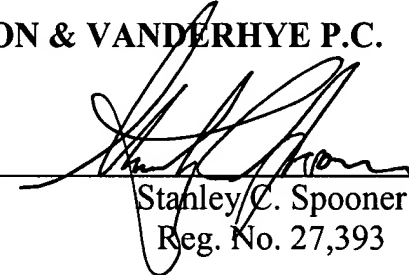
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In view of the above, the rejections of claims 1-6, 13-23, 25 and 27 are clearly in error and reversal thereof by this Honorable Board is respectfully requested.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____


Stanley C. Spooner
Reg. No. 27,393

SCS:kmm
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100